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This is a report of the 1966, eight-week summer institute in the fundamentals of research held at Western Kentucky University. The 45 participants were school administrators, curriculum personnel, and teachers in elementary and secondary schools from 34 school districts in western Kentucky. They were selected on the basis of established criteria for identifying those individuals capable of and in position to render research services to local school units. The institute was designed to help develop research programs by providing preparation in fundamental research methods. The institute program contained two basic elements--a study of research fundamentals, and statistics. An evaluation of the institute indicated very favorable reception for the total program. Written reaction to the institute by participants indicated change in their research awareness, instruction, and graduate commitment. (HW)

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FUNDAMENTALS OF RESEARCH DEVELOPMENT INSTITUTE

WESTERN KENTUCKY UNIVERSITY
September 1966

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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OFFICE OF EDUCATION

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FUNDAMENTALS OF RESEARCH DEVELOPMENT INSTITUTE

Grant Number: OEG2-6-061776-1081

Henry N. Hardin, Ed.D

June 13, 1966
to
August 5, 1966

The training program reported herein was conducted pursuant to a grant from the Office of Education, U.S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment of the conduct of the project. Points of view or opinion stated do not, therefore, necessarily represent official Office of Education position or policy.

WESTERN KENTUCKY UNIVERSITY

Bowling Green, Kentucky

CONTENTS

		Page
I.	Orientation of Program	1
II.	Description of Program	5
III.	Evaluation of Program	8
IV.	Program Reports	17
Appendix A-1		
	Institute Personnel	21
Appendix A-2		
	Institute Consultants	26
Appendix B-1		
	Participants Studies	28

FUNDAMENTALS OF RESEARCH DEVELOPMENT INSTITUTE

I. Orientation of Program

Western Kentucky University has traditionally engaged in cooperative projects designed to strengthen elementary and secondary school programs within the state. These cooperative ventures have included such activities as the establishment, with twenty-four school districts, of a film library, field and consultative services, cooperative schools and numerous school in-service projects. Close coordination through the College of Education has been achieved with several state agencies, with school district projects under Title I and Title III of the Elementary and Secondary Education Act, and with the Central Midwestern Regional Education Laboratory.

In order to continue the close alignment of the University with elementary and secondary education, programs were undertaken to improve the research capacity of both the University and the local school unit. College of Education personnel have been selected with both the teaching and the service function being considered. Careful selection of personnel has gradually built a faculty capable of expansion and development of research services.

Little can be accomplished in implementing, disseminating, or utilizing research if teachers and administrators are not aware of basic, fundamental research procedures. Realizing the need to establish a more favorable climate for research activities, an institute was established which dealt with fundamental research methods.

The research institute was designed to provide the basis for the development of research programs by providing preparation in fundamental research methods to a carefully selected group of school administrators, curriculum personnel and teachers without previous research training. By developing an understanding of the nature of research, the institute attempted to develop aptitude in problem identification, understanding of simple design, and an appreciation for the tools of research. Further functions of the institute were identified as a result of our expectation of the participants to perform a coordination and a dissemination function in the local school district. Leadership for research activities was to be identified from the institute participants, and individuals identified as outstanding during this institute were to be encouraged to pursue research activities which might lead to the Masters, Specialist or Doctors degree.

The summer institute in the fundamentals of research lasted for eight weeks from June 13, 1966, to August 5, 1966. Dates for the institute corresponded to the period for the summer session of the University and participants were involved in no other class activities.

Participants were selected on the basis of established criteria aimed at identifying those individuals capable of and in position to render research services to the local school unit. Final selection was made by an advisory committee with local school district representation. Criteria for selection included the following:

1. Ability of the individual to be in a position to supply research service.

2. Recommendation of the local school district.

3. Academic achievement and aspiration of the individual.

4. Available test results such as the Graduate Record Examination and the National Teachers Examinations.

5. Personal factors such as age, interests, talents, and experience.

6. Personal interviews.

The forty-five participants in the institute represented thirty-four school districts of Western Kentucky. For the most part these districts may be described as small and rural. In terms of pupil enrollment, school districts represented ranged in size from 7766 to 415. Various sub-groups identified within the institute included administrative and guidance personnel, 10; science and mathematics teachers, 8; health and physical education teachers, 8; social studies teachers, 7; English teachers, 5; elementary and reading teachers, 4; art and music teachers, 3. Of the total group fourteen held master's degrees, and the remaining thirty-one were at various stages of completion of the requirements for the master's degree. All but two of the group were experienced teachers, and twenty-five had more than three years of teaching experience.

Specific objectives of the institute were the following:

1. To provide to the schools of Western Kentucky, individuals knowledgeable in the fundamentals of research.

2. To provide a group of individuals who will implement research studies in the local school system.

3. To provide individuals capable of coordination and dissemination of research information.

4. To provide a basis for the identification and selection of outstanding research personnel.

5. To provide individuals in the local school systems capable of fundamental research design, implementation, and interpretation.

6. To provide personnel for future research studies.

7. To provide individuals capable of implementing needed research under the Elementary and Secondary Education Act at the local level.

8. To provide a sound basis for experimentation and demonstration projects in cooperation with regional laboratories.

II. Description of Program

Varied groupings are possible to describe the program of the institute, but two major classifications would seem to suffice. Major content for the institute was divided into the study of research fundamentals and statistics as used in the study of education. Every attempt was made to coordinate major content areas and these were not considered as separate or unrelated parts. However, for purposes of clarity, the major content areas for research fundamentals and for statistics are discussed briefly.

Major content areas for research fundamentals were grouped under the following headings:

1. Development of Research Thought
2. Types of Research
3. Mechanics of Research
4. Specialized Tools of Research
5. Significant Research In Selected Areas
6. Research Support

Development of research thought included topics which dealt with the development of scientific thinking as applied to the solution of problems in the social sciences. Consideration was given to the present status of research in education and to the development of the research continuum ranging from basic to applied studies.

Types of research ranged from a consideration of status surveys to the laboratory experiment. Various systems for the classification of research were considered and examples of each type were demonstrated.

Understanding of research reports and the criteria to judge research were considered as mechanics of research. Elements of the research proposal and the research report were carefully studied.

Research uses specialized tools. Throughout the institute, participants became familiar with statistical procedures, specialized references and methods used in research.

Significant research in selected areas included consideration of classic and contemporary research studies. Research in specific areas was discussed based upon the apparent areas of interest of the institute participants.

The function of agencies and institutions with research responsibilities was presented to the institute. The role of the Federal government and the development of the regional laboratories for research were considered. An attempt was made to understand how agencies ranging from the Federal government to the local school district function to provide research services. Research services of the State Department of Education and of the College of Education were related to the local school districts.

The major content area of statistics as used in the study of education included those concepts of

descriptive statistics usually included in any basic course in statistics. Care was exercised throughout the institute to relate each statistical procedure to research studies. Assumptions underlying statistics used in research studies were stressed, and institute participants were helped to select procedures appropriate to problems which had been identified.

Schedules for the research institute were flexible in order that participants might have full advantage of resource people which were available. The basic hourly schedule was determined previous to the institute. When in the opinion of the staff an alteration in the daily schedule was to the benefit of the participants, this alteration was made. The basic schedule was as follows:

Institute Schedule

Time	Event	Hours
7:30 - 8:45	Lecture	1¼
9:00 - 10:15	Statistics, Section I	1¼
9:00 - 10:15	Seminar, Section I	
10:30 - 11:45	Statistics, Section II	1¼*
10:30 - 11:45	Seminar, Section II	
12:00 - 1:00	Lunch	
1:00 - 2:15	Workshop**	1¼
2:30 - 4:00	Study Groups***	1½
4:00 - ?	Individual Appointments as Scheduled	

*Participants divided into smaller interest groups seminars and statistics.

**The workshop varied somewhat in time. For example, films were used each Wednesday afternoon, and these sessions usually ended about two-thirty.

***Study group sessions were both formal and informal. Participants would work on similar problems in small groups or by total group meetings.

Minor changes were made in the professional staff (See Appendix A-1). These changes were necessary for the success of the institute. The permanent staff of the institute was supplemented by the use of special consultants (See Appendix A-2) from throughout the University and from other institutions.

III. Evaluation of the Program

A. Program Factors.--An examination of some of the program elements of the institute provides a preliminary evaluation of the total worth of the preparation in fundamental research methods. As each participant during the eight week period developed a previously identified problem of importance to the local school district, final evaluation should rest with the action taken to arrive at a solution to this problem. Studies (See Appendix B-1) are to be carefully evaluated during the 1966-67 school year to determine the impact of the summer's work within the local school district. Program factors considered for the initial evaluation included objectives, content, staff, participants, organization and budget.

a. Objectives.--An examination of the eight stated objectives of the research institute reveals statements which indicate the need for the development of a research climate and the need for individuals capable of a coordinating function. Major problems of research have for some time originated from the lack of understanding of research findings, an unfamiliarity with research methods as well as an inability on the part of local school people to implement what they do not understand. Problems such as these were identified in 1962 by the Third Annual Phi Delta Kappa Symposium on Educational Research Dissemination and Implementation. While no one is foolish enough to take the position that one course, or one institute will produce the research personnel needed in education, several outcomes related to the objectives seemed apparent.

Representatives of thirty-four school systems in Western Kentucky received preparation through the summer institute in the fundamentals of research. The majority of the forty-five participants will implement some research activity in the local districts during the 1966-67 school year. Participants in the institute have been placed upon the mailing lists of state agencies such as the Research Division of the State Department of Education, and these individuals will receive research reports and other available publications. Several of the participants have definite plans for the presentation of studies and proposals of studies to teacher and administrative groups. Twelve of the forty-five participants have expressed a definite interest in additional training beyond the master's degree. Plans have also been made in several of the local school districts to

encourage this group to engage in research and research related activities. In at least one system participants may receive additional compensation for engaging, with the approval of the local school board, in a research study. Additional graduate credit up to three semester hours will be allowed for those projects approved in specific areas. Personnel are now available to be involved in future studies and more carefully controlled evaluations are planned for projects under Title I of the Elementary and Secondary Education Act of 1965. The Central Midwestern Regional Educational Laboratory will be furnished with lists and recommendations of participants who are willing and capable of research involvement. At least one project developed during the institute may receive financial support from the regional laboratory.

b. Content.--Previous to the institute, participants were encouraged to confer with the leadership in the local school district in order that suitable research activities might be identified. During the institute, where it was possible, there was additional communication about the development of the problem, the implications from the review of the literature, and the procedure being developed for the study of the problem. Through this means problems were identified early in the eight week period and the participants were able to relate the content materials to realistic situations.

Following the more formal presentation during the lecture period, seminars allowed for a discussion of the materials presented. During the first week

of the institute, the seminars were conducted by a staff member. This did not seem to be as productive as had been anticipated, and smaller interest groups were formed with a participant serving as a chairman. Placing this responsibility upon the group with the staff readily available for consultation was far more beneficial. In fact, participants in the evaluation of the institute stated several instances in which they felt the groups for statistics were, of course, absolutely essential.

In the six major areas of program content, an attempt was made throughout the institute to present examples from research studies for purposes of illustration. Participants were encouraged to attempt to relate techniques and methods discussed to local educational problems. The fundamental research content areas may be summarized as follows:

1. Development of Research Thought.--Consideration of scientific inquiry; scientific methods and research developments; the meaning of research; the continuum of basic to applied research; the status of research in education.

2. Types of Research.--The classification of research studies; historical research; research surveys; laboratory and field experiments; ex post facto research; action and applied research.

3. Mechanics of Research.--The research proposal; research methods and designs; sampling; reporting of research; abstracting.

4. Specialized Tools of Research.--The research report; statistics; the use of the library; testing; the questionnaire, (the interview,) and the critical incident technique.

5. Significant Research In Selected Areas.--Review of classical and contemporary research studies; teacher effectiveness; human relations; administration and supervision; physical education; special education; reading; social studies.

6. Research Support.--The Federal Government and Research, Regional Research Laboratories; State Departments of Education; Colleges of Education and Research; Local School Districts and Research.

With each participant developing an identified problem, reviewing the literature, and designing the study, the workshop periods were very valuable. As each section was completed, these were considered by the staff and the small groups, and then, each participant revised the section. The completed paper presented at the end of the institute was designed to serve as a guide for research activities in the local school system during the 1966-67 school year.

c. Staff.--Professional staff for the institute consisted of a program director and instructor who devoted three-quarter time to the institute, three additional half-time instructors, consultants, and an administrative assistant. The number of professional staff was adequate, and secretarial help

was also available. Consultants from both the University and from other institutions were well received and contributed greatly to the success of the program.

The interest and contribution of consultants from within the university were indeed gratifying. Numerous faculty members from departments throughout the University served as advisors to the institute participants in substantive areas. Research in specific areas was presented by the University staff members with specialization in the area under consideration.

d. Trainees.--As the program of the institute was designed to promote research in the local school district, the involvement of the superintendent was essential in the selection of the participants. By this method the possibility of implementation of research activities was greatly enhanced. The selection of participants from the limited geographical area of Western Kentucky insured that participants held common interests and problems; however, the size of the group insured representative covering of educational problems. Since the group was from a limited area there were no commuter problems. Participants from the greatest distances from the University either established temporary residence or lived in dormitories.

e. Organization.--Probably now, more than at any other time, elementary and secondary school personnel are faced with the problem of justification of new and diverse programs. There is an increasing demand for research and research-related activities. School administrators recognize that having personnel with some

preparation in research is essential. Interest in the program by local school districts was high, and participants, in many instances, presented problems which had been suggested by the local district.

Institute participants were involved for an eight week period, and the job completed could not have been done in less time. The daily schedule included some six hours of directed study and additional time in preparation, library work, and statistics. All meetings were held in a newly completed air-conditioned building. This facility provided ample meeting rooms and made available to the institute all necessary equipment.

f. Budget.--Amounts included in the proposed budget for the institute indicated the best estimate of actual cost that was possible at the time the proposal was completed. The estimate for books for use in the institute was on the average low, and the amount requested for film rental was high. However, the use of the University's films at no cost to the institute may account for some of this difference.

B. Unique Features.--Several features of the institute deserve to be mentioned. These include student background, student interest, method of problem development, and the contribution of consultants.

Although participants often worked in different subject matter areas, backgrounds were similar. The systems represented were largely rural with similar economies. There was much exchanging of information,

and several cooperative arrangements were made among participants to engage in research activities regardless of district boundaries. Interest was high throughout the institute. Without previous research experience participants approached the institute with considerable caution but, at the same time, with much expectation. With previous problem identification within the school system, participants appeared to readily grasp the task of developing, reviewing and designing a procedure for the solution of the problem. As the institute progressed, participants received suggestions for improving the proposed study from the institute staff and from the institute groups. This resulted in what the staff believed to be an extremely effective method for the precise development and refining of the problem as well as for providing for the strategies needed in problem solutions.

The contribution made to the institute by consultants was indeed outstanding. Selected research papers from various institute consultants will be published in the fall of 1966. Student reactions often indicated that one of the specialized consultants had been the outstanding feature of the institute.

C. Major Difficulties.--If a major problem existed in the institute, it was with the recruiting of participants. There was some question as to when information could be released to local school systems. Superintendents had been alerted to the situation and many of the superintendents were ready to make recommendations. By the time information was released that approval of the budget had been received, the full impact of other Federal programs, especially summer programs, was felt. In

a few instances summer plans had already been finalized and in other cases the entire staff was needed in the local district.

D. Overall Evaluation.--Student evaluation of the institute indicated very favorable reception for the total program. Written reaction to the institute by participants indicated change in the areas of research awareness, instruction, and graduate committment.

The expressions of the participants indicated that they realized the potential of research for improving school programs. The institute was described as a positive approach to the solution of educational problems. Several participants felt that as a result of the institute educational problems would be more readily recognized and defined. The study of research methods provided the structure to systematically study educational problems. The ability to obtain meaning from research studies was developed and an increased committment to research was obtained. A more critical approach was provided for the evaluation of educational programs.

Participants felt that the research institute had fostered the desire for better instruction and provided new approaches to the solution of instructional problems. Emphasis was placed on immediate and local problems. Students felt that this procedure made their studies and research

methods more meaningful. Participants indicated that changes would occur in teaching and in local school systems as a result of the institute experience.

Educational plans were finalized by many of the participants during the institute. Committment to advanced graduate study was fostered through participation in this program. Work in educational research not only created a desire for advance work but also developed self-confidence in the participants ability to continue graduate study. Fifteen of the forty-five participants have expressed definite interest in preparation leading to the specialist's or doctor's degree.

E. Recommendations and Comments.--Forms and instructions from the Educational Research Training Program were adequate and easily understood. Cooperation of the training branch has been excellent in any problem which arose. It is recommended that summer institute contracts be finalized by March 15th or before in order that a more adequate selection process may be operative.

IV. Program Reports

A. Publicity.--Publicity was given to the institute through various news releases to local papers, television and radio stations. Mention was also made in the University Alumni bulletin of various research development activities. Pamphlets describing the program were mailed to all the school districts of Western Kentucky, especially to those districts involved in the cooperative Title III project with the Bowling Green Schools.

B. Application Summary.

a. Approximate number of inquiries from prospective trainees (letter or conservation) 60

b. Number of completed applications received 52

c. Number of first rank applications (Applicants who are well-qualified whether or not they were offered admission) 51

d. How many applicants were offered admission 51

C. Trainee Summary.

a. Number of trainees initially accepted in program 48

Number of trainees enrolled at the beginning of program 45

Number of trainees who completed program 45

b. Categorization of trainees

(1) Number of trainees who principally are elementary or secondary public school teachers 35

(2) Number of trainees who are principally local public school administrators or supervisors 10

(3) Number of trainees from State education groups — 0

(4) Number of trainees from colleges or universities, junior colleges, research bureaus, etc. (specify)

0	0
0	0
0	0

D. Program Director's Attendance.

a. What was the number of instructional days for the program? — 40

b. What was the percent of days the director was present? — 100%

E. Financial Summary.--(Note: This summary does not serve as a final financial report as amounts need not be exact.)

	Budgeted	Expended or Committed
a. Trainee Support		
(1) Stipends	$31,800.00	$27,000.00
(2) Dependency allowance		1,560.00
(3) Travel	424.00	408.32

b.	Direct Cost		
	(1) Personnel	5,954.00	5,854.00
	(2) Supplies	711.00	736.63
	(3) Equipment		
	(4) Travel	314.00	312.48
	(5) Other	600.00	302.08
c.	Indirect Costs	3,054.00	2,755.71
	Total	$42,857.00	$38,929.22

APPENDIX A-1

INSTITUTE PERSONNEL

1. Henry N. Hardin, Associate Professor of Education and Director of the Institute

Education:

Institution	Degree		Specialization
University of Miami Coral Gables, Florida	B.Ed.	1955	Elementary Education
University of Kentucky Lexington, Kentucky	M.A.	1959	Administration & Supervision
University of Miami Coral Gables, Florida	Ed.D.	1965	Science Education

Experience:	Years
Elementary and Secondary	11
Higher Education	3

Institute Responsibilities:

1. Director of Institute
2. Instructor
3. Counseling
4. Evaluation

2. Charles C. Clark, Professor and Director of Extension and Field

Appendix A-1, Cont.

Education:

Institution	Degree		Specialization
Southwestern State College Weatherford, Oklahoma	B.S.	1939	Mathematics & Biology
Texas A & I Kingsville, Texas	M.S.	1951	Guidance
University of Oklahoma Norman, Oklahoma	Ed.D.	1957	Education Administration & Secondary Education

Experience:	Years
Elementary and Secondary	8
Higher Education	9

Institute Responsibilities:

1. Instructor
2. Counseling

3. Earl P. Murphy, Associate Professor of Education and Instructor of Statistics

Appendix A-1, Cont.

Education:

Institution	Degree		Specialization
Indiana State University Terre Haute, Indiana	B.A.	1933	Education
Indiana State University Terre Haute, Indiana	M.A.	1938	Education
St. Louis University St. Louis, Missouri	Ph.D.	1960	Chemistry & Education

Experience:	Years
Elementary and Secondary	12
Higher Education	7

Institute Responsibilities:

1. Instructor
2. Counseling

4. William R. Pierce, Jr., Instructor and Seminar Discussion Leader

Education:

Institution	Degree	Specialization
University of Missouri Columbia, Missouri	B.S.	Education
	MEd	Education
	Ed.D.	Education

Experience:

	Years
Elementary and Secondary	7

Institute Responsibilities:

1. Instructor
2. Counseling

5. Archie C. Jordan, Jr., Administrative Assistant

Education:

Institution	Degree		Specialization
Western Kentucky State College Bowling Green, Kentucky	B.A.	1960	Education
George Peabody Nashville, Tennessee	M.A.	1964	Education

Appendix A-1, Cont.

Experience:	Years
Elementary and Secondary	1
Higher Education	1

Institute Responsibilities:

1. Assistant Instructor

APPENDIX A-2

INSTITUTE CONSULTANTS

Mr. Melville J. Appell--Deputy Commissioner for Mental Retardation; Department of Mental Health; Frankfort, Kentucky.

Dr. J. C. Crowe--Head Department of History; Western Kentucky University; Bowling Green, Kentucky.

Dr. Donald Elswick--Director of Research; State Department of Education; Frankfort, Kentucky.

Dr. Larry Laird--Associate Professor of Psychology; Western Kentucky University; Bowling Green, Kentucky.

Dr. John D. Minton--Dean of the Graduate School; Western Kentucky University; Bowling Green, Kentucky.

Mr. James Moore--Assistant Professor of Education; Western Kentucky University; Bowling Green, Kentucky.

Dr. George Mouly--Professor of Educational Research; University of Miami; Coral Gables, Florida.

Dr. Morris Osburn--Director of Human Relations Center; Western Kentucky University; Bowling Green, Kentucky.

Dr. Tate C. Page--Dean of the College of Education; Western Kentucky University; Bowling Green, Kentucky.

Dr. William Solley--Head Department of Health and Physical Education; Western Kentucky University; Bowling Green, Kentucky.

Appendix A-2, Cont.

Dr. Fay Starr--Central Midwestern Regional Educational Laboratory; St. Louis, Missouri.

APPENDIX B-1

PARTICIPANTS STUDIES

Participant and School System	Problem
Beard, Jean Metcalfe County	The Effectiveness of A Development Reading Program
Bearden, James F. Hopkins County	The Teacher Aide Program in Hopkins County
Brown, Everett R. Ohio County	The Use of Teacher Aides in the Ohio County High School
Bushong, Wanda H. Edmonson County	Potential Female Dropouts and Development of A Program in Home Economics
Butler, Robert D. Daviess County	The Relationship Between the Predicted Grade Point Average and Achievement or Grade Point Average as Related to the Ohio Valley Conference Scholarship Freshman Football Players for the Academic Year 1966-67
Childress, Imogene Grayson County	Growth of Retarded Readers in A Developmental Reading Program
Conkin, Evie J. Monroe County	Reasons for Pupil Dropout in Grades 9-12 of the Monroe County Schools

Appendix B-1, Cont.

Curnutte, Ivan Green County	Physical Fitness Program in Green County Schools
DeSpain, Mary L. Green County	Effectiveness of Project Work in Developing Concepts of Science
Dicken, Billy G. Clinton County	Consolidation and Academic Achievement
Duvall, Billy F. Clinton County	Remedial Reading Project in the Clinton County School System
Ferell, Albert D. Christian County	Gains Made by Retarded Readers with Different Degrees of Retardation and of Different Learning Ability
Fleming, John T. Allen County	Art Ability and Art Appreciation as Measured by the Ten Point Art Evaluation Scale
Francis, Bill C. Henderson County	Full Membership in the Southern Association of Colleges and Schools
Gaddie, Judy C. Larue County	Traditional and Programmed Instructional Procedures for Use in the Elementary School
Gentry, Lelia Warren County	Effectiveness of Special Reading Classes Upon Low-achievers in Reading
Green, Robert C. Butler County	Physical Education Program in Butler County Schools

Appendix B-1, Cont.

Grooms, Buleah R. Glasgow Independent	Effective Grouping Practices for the Educationally Deprived Pupils in the Primary Grades
Guthrie, Joe P. Bowling Green Independent	What Parents Want to Know From Parent-Teacher Conferences
Hacker, Julius P. Scottsville Independent	Needs of Educationally Deprived Children in the Scottsville Independent School District
Hallford, Ilus M. McLean County	To Measure the Relationship, if any, Between the Teachings of Economics to High School Seniors and the Consumer Practices of Those Seniors
Hogue, Anna F. Campbellsville	The Effects of Taped and Programmed Instruction on Comprehension of Speech Concepts
James, Steven C. Bowling Green Independent	Achievement and Parental Pressure
Jenkins, David F. Earlington Independent	The Youth Physical Fitness Program in the Earlington Independent School System
Jones, Mary E. Metcalfe County	Evaluation of the Developmental Reading Program in Metcalfe County

Appendix B-1, Cont.

Lindsey, Gwendolyn Butler County	Progress of Retarded Readers
Mattei, Otto A. Bowling Green Independent	Mirror Television as A Procedure Designed to Stimulate Teacher Self-Evaluation
McCarley, John W. Russellville Independent	Educational and Vocational Gains Made by Negro Graduates of the Russellville City Schools as a Result of Integration
McCubbins, Wanda F. Elizabethtown	The Relationship Between Awareness of Structural Relationships in English and Ability in Composition Writing
Moorman, Ruth Breckinridge County	Study in Basic Mathematics in the Tenth Grade
Morgan, Thomas E. Bowling Green Independent	Achievement Through Independent Study
Porter, James C. Russell County	A Follow-up Study of the College Students From Russell County High School
Poynter, Jack Owensboro Independent	An Evaluation of the Owensboro Kentucky Art Program

Appendix B-1, Cont.

Ricketts, Zeb Barren County	Plant Facilities in the Barren County School System
Sharpe, David R. Cumberland County	Physical Fitness Program in Marrowbone Elementary School
Slaughter, Donal I. Edmonson County	A Study of the Most Effective Method of Teaching English in the Seventh and Eighth Grades at Brownsville Elementary School
Snider, Pearl S. Simpson County	Improved Practices in Teaching World History
Thompson, David Nelson County	To Determine the Correlation, if any, Between Actual Physical Ability and A Positive Attitude Toward Physical Education
Topmiller, Ben Jr. Muhlenberg County	School Plant Facilities in Muhlenberg County School System
Vibbert, Veachel Cloverport Independent	Financially Deprived Children in the Cloverport Independent School District
Wakefield, James L. Ohio County	The Use of Teacher Aides in the Ohio County High School
Warren, Arthur Taylor County	The Effectiveness of A Physical Fitness Program in Taylor County Elementary Schools

Appendix B-1, Cont.

Wilder, Paul W. Central City	Teaching Slow Learners in Mathematics to Provide for Maximum Efficiency in Achievement
Wilderson, Dwight Owensboro Independent	Identifiable Differences in Concepts Used in Two Modern Mathematics Textbooks
Wright, Loretta S. Edmonson County	Potential Female Dropouts and Development of A Program in Home Economics